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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/576,878      | 04/21/2006  | Yasushi Ogino        | 358275.30007        | 6170             |

38327 7590 01/28/2009  
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| EXAMINER |
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AHMED, SHEEBA

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| ART UNIT | PAPER NUMBER |
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1794

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| MAIL DATE | DELIVERY MODE |
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01/28/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/576,878 | <b>Applicant(s)</b><br>OGINO ET AL. |  |
|                              | <b>Examiner</b><br>SHEEBA AHMED      | <b>Art Unit</b><br>1794             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-10,12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4,5,7-10,12 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 1-3 are withdrawn and claims 6, 11, and 13 are cancelled. No amendments have been made to claims 4, 5, 7, 8, 9, 10, 12, and 14 which are pending and are under consideration.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4, 5, 7, 8, 9, 10, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obha et al. (US 6,605,344 B1) in view of Ohba et al. (US 5,439,745 A).

Obha et al. disclose a gas-barrier film which is produced through applying a layer containing a metallic compound to a surface of a processed-polymer layer produced from a mixture of a polyalcohol and at least one poly(meth)acrylic polymer selected from the group consisting of poly(meth)acrylic acids and partially neutralized poly(meth)acrylic acids. The gas-barrier film may be laminated with a plastic film (See Abstract). A metallic-compound-containing layer which is applied to the surface of a polymer layer may be a layer containing a metallic compound alone, or a layer containing a resin in which a metallic compound is mixed or dispersed (hereinafter the

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layer will be referred to as "layer of a mixture of metallic compound and resin"). A gas-barrier film in which the surface of the polymer layer to which the metallic-compound-containing layer is not applied is fixed onto a substrate layer is also disclosed. The process for forming a polymer layer from the above-prepared composition is not particularly limited. For example, a polymer layer is obtained through any of the following processes: a solution-cast process in which an aqueous solution of a polymer mixture is applied onto a support (substrate) and dried to form a film; an extrusion process in which an aqueous solution containing a polymer mixture at high concentration is cast through a tiny space by use of an extruder under ejection pressure, and the resultant water-containing film is dried on a rotary drum or belt; and a process in which an aqueous solution containing a polymer mixture at high concentration is applied onto a plastic film, and the film is stretched under heating. A layer constituted solely by a metallic compound or a layer of a mixture of metallic compound and resin, serving as a metallic-compound-containing layer, is applied to the surface of a polymer layer which is fixed onto a substrate (See Column 2, lines 45-64 and Column 6, lines 27-40).

Ohba et al. do not specifically state the metal compound coating layer is stretched.

However, Ohba et al. in US 5439745 A discloses a polyvinyl alcohol product and a multi-layer product containing the same wherein the improvement of the gas barrier property is prominent in a melt-molded PVA product containing 0.5 to 2.0 mmol, based on 1 g of PVA; and these PVA products are preferably used in a field which requires a

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high gas barrier property. A stretched melt-molded PVA product is obtained by mixing a metal compound with PVA in the mixing ratio of 0.01 to 3.0 mmol based on 1 g of PVA, melting and kneading the mixture, molding the resultant mixture and stretching the thus-obtained melt-molded PVA product by tentering or inflation. Although the stretching ratio is preferably as high as possible, for the purpose of giving a high barrier product, it is usually at least twice, more preferably 4 to 12 times in area magnification. It is considered to be because the orientation and crystallization of the molecular chains of PVA progress that the gas barrier property is improved by the stretching. The thus-obtained single-layer stretched, melt-molded PVA product is used as a sheet, a film or a container such as a cup and a bottle. The thickness of the stretched, melt-molded product is 1 to 100 microns. A stretched multi-layer product may be produced by laminating a sheet or a film of other resin to the sheet or the film stretched melt-molded PVA product. A plurality of extruders can be used to produce a multi-layer film or a multi-layer container, and stretching the thus obtained product. The layer structure of the stretched multi-layer product is not specified, but at least one layer is a layer of the stretched melt-molded product composed of PVA-metal compound composition.

Accordingly, it would have been obvious to one having ordinary skill in the art to stretch the entire multilayer structure including a metal compound containing layer given Obha teaches that doing so improves the gas barrier property of the multilayer structure.

***Response to Arguments***

3. Applicant's arguments with respect to claims 4, 5, 7, 8, 9, 10, 12, and 14 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEEBA AHMED whose telephone number is (571)272-1504. The examiner can normally be reached on Monday-Friday from 8am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sheeba Ahmed/  
Primary Examiner, Art Unit 1794